



PROVIDING EDUCATION FOR MITIGATING CLIMATE CHANGE IN THE NIGER
DELTA REGION OF NIGERIA

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ABSTRACT

Activities of man have disastrously disrupted weather conditions thereby giving rise to global warming and climate change. Careful examination of the present situation reveals that the possibilities of abetting these human activities which promote global warming and climate change may not be in sight because developing and underdeveloped nations are on their way to joining the league of industrialized nations, a development that will principally contribute to increase in man's activities that cause global warming. Acting right to mitigate the dangers of climate change especially in the Niger Delta region of Nigeria can be to initiate conscious programmes through education on the consequences of unsustainable relationships with the environment. This paper makes a case in this direction that sensitizing man on the implications of his actions through innovations in education can go a long way in producing behaviours that can among other things develop collaborations among disciplines which can prioritize breakthroughs in alternative methods of resource exploitation that can be friendly to the environment, inculcate morals that can prioritize support for sustainable resource management as well as the institutionalization of a culture of love and stewardship in issues of the environment as life and the only source of survival for present and future generations.

Keywords: Climate Change; Education; Niger Delta; Nigeria; Pedagogy; Literacy.

1. INTRODUCTION

One self evident truth is that the environment is central to the survival of all forms of life. Its preservation amounts to preserving life and sustaining the beautiful creation of God and its destruction amounts to destroying life and the beautiful creations of God. Mankind's awareness of the above, accounts for the prominence given to the environment and issues of the environment in local, regional, national and international fora and conventions and an emerging attitude that follows this is one which recognizes that the quality of life of individuals globally depends on the quality of the environment in which the individual lives. This new focus on the environment has provoked philosophical reflections the result of which is that issues of the environment take centre stage in many disciplines and academic discourses. While these reflections are carried out on a daily basis in different territories and regions and in the various academic disciplines, stakeholders remark in unison and in unambiguous terms that mankind's relationship with the environment has been so unsustainable so much that all the life support systems inherent in the environment have been excessively and terribly compromised in ways that the environment presently exceeds its carrying capacity in terms of those components it is

expected to have but has excessively increased in containing substances and chemicals which pollute, deplete and degrade the environment. The implication is that the environment presently manifests problems and challenges which threaten man and his survival.

One unfortunate development about climate change like other environmental problems is that members of the global community lack the necessary awareness on ways of adjusting to the challenges occurring in their environments. This matter is made worst by the fact that little attempts to address and create awareness on climate change only result in international environmental diplomacy where people whose actions and activities are responsible for climate change and other environmental problems gain further access to continue in their immoral and life threatening adventures. In all honesty, climate change is a serious plague that can devastate mankind if it is not addressed very urgently and a mechanism for doing this without any side effect is the institutionalization of moral rationality and social restructuring through education. This paper is an attempt to provide signposts and roadmaps for translating this into a reality.

2. CLIMATE CHANGE AND ITS IMPLICATIONS FOR HUMANITY

One global environmental problem and challenge which has been a source of worry and concern to humanity globally is climate change. Basically climate change is associated with global warming which Eheazu (2011:13) defines “as consistent increase of our world’s temperatures scientifically explained to be caused by a number of factors relating to the pollution of our atmosphere which serves to distribute the energy of the sun’s radiation received by the earth”. The United Nations Framework Convention on Climate Change (UNFCCC, 1992) defines climate change as a change in climate which is attributed directly or indirectly to human activities that alter the composition of the global atmosphere and which are in addition to natural climate variability observed over comparable time period. Natural climate variability apart, human activity is principally the major stimulant of climate change. Many observers of the environment have long acknowledged the fact that all the colossal and monumental problems terrorizing man and the global community are the handwork of man. Man has in his scramble to sustain his insatiable consumption and production patterns especially members of the industrialized world, consciously and unconsciously tempered with the natural structure of the earth and the universe. The above definitions can simply be translated to mean that climate change is increase in temperature on the surface of the earth, be it on land, sea or air.

Climate change is at the centre of the complex and multiple crisis of the 21st century. Part of what makes climate changed a multiplier of crisis is its ability and capability to increase poverty and social polarization. Climate change is also complex because it places different people in the North and the South in different dehumanizing and miserable circumstances. Climate change is associated with altering the earth’s atmospheric conditions, usually in the form of making the atmosphere to become warmer. When this occurs, nature becomes unstable (Sachs, 2009) and the natural balance usually associated with nature suffers unpredictable disequilibrium. Physical areas where the alternations in nature as a result of climate change usually occur are in patterns of rainfall, ground water levels, temperature, wind or seasons (Sachs, 2009).

Objectively, the patterns of atmospheric alternations may result in water scarcity in the form of lack of rain or extreme rainfall or plenty of rain in some regions of the world. Since climate change has become a matter of great concern, there has been water scarcity in some “30 countries with a combine population of over 500 million” (Sachs, 2009) and experts estimate and project that this will terribly increase in the near future. In such regions which witness scarcity of rainfall, drought can become common experience. On the other hand in regions of the world where alteration of the atmospheric condition occasions extreme rainfall, flooding can be an experience. In any of the cases, what is sure is that the prevailing atmospheric condition must have terrible effects on plants, animal and human beings. For instance about a one percent

per year increase in CO₂ emission (Sachs, 2009) will result where there is water scarcity and any rise in sea levels will be matched and corresponded with increase in coasted flooding and subsequent displacement of people especially in the Niger Delta region of Nigeria where people endure misery and hardship as norms of the political and social order.

One area of human endeavour where the positive and negative imprints of climate change are visible and obvious is agriculture and food production. Where the occurrence of climate change results in increase in temperature, there is the possibility of improved yield in some crops especially cereals. There are instances where increase in temperature can lead to drastic reduction in the yield of some crops. Consequently the field of agriculture can be one area where mankind can be sensitized adequately through education on possible new lines of actions and behaviours that he can initiate so as to remain relevant in a climate change regime as we presently have it for instance, it has been recognized that “higher concentration of atmospheric carbon dioxide in the atmosphere increases harvests” and “can make crops require less regulation and be more likely to survive drought as well as be less vulnerable to airborne pollution” (Patrinis 1990), suggesting the possibilities of advantages and disadvantages of present environmental challenges occasioned by global warming and climate change.

One may not need a soothsayer or a diviner to tell or educate him on the likely health challenges which man can face in a regime where climate change has come to stay. Lack of good drinking water is a vector and direct invitation for waterborne diseases and other ailments associated or linked to malnutrition can be on the rampage due to increase in atmospheric temperature and this can result in the prevalence of malaria. It is possible that the continuous warming of the environment and increase in temperature can bring about increase in heat waves and related deaths especially among children and the elderly.

One development in current climate change regime that is as sure as day and night is the inherent possibility of climate change to threaten human rights and promote socioeconomic inequality globally. Evidence in support of the above is on the finger tips of every reflective and curious thinker. No doubt, climate change brings about misery and dehumanization in addition to usurping people’s rights to clean environment and access to critical natural resources (Chawla, 2009). In this circumstance, peoples natural right to life and survival are terribly imparted. What is behind the acceleration of climate change is capitalism and competition in the process of production. The point is that we do not need any prophet or soothsayer to tell us that capitalism and industrialization are the drivers of climate change and in addition, these and their operators promote repressive exercise of power (Sachs, 2009) as well as supports the expulsion of people from land which is their basic source of livelihood.

Part of what is principally responsible for climate change and other environmental problems globally is the actions and activities of developed countries. This is not to exonerate the developing and underdeveloped countries and underdeveloped countries as not contributing to global climate change. Under the weight and siege mentality of imperialist resource exploration in developing and under developed countries that is promoted by capitalism and globalization with their appropriation of the resources of the poor developing and underdeveloped countries for mechanized agriculture and such other industrial regimes, the poor in these countries do not have any alternative than to indulge in acts that promote climate change.

What the above seems to point towards is that consciously or unconsciously, actions and behaviours that promote climate change are knowingly and unknowingly committed and climate change as a phenomenon does not recognize border or is a trans-border environmental problem. In other words actions in one country can induce climate change in another country just as actions and activities of multinational corporations operating in one territory can cause environmental degradation or climate change in another country.

These webs of actions and activities in their simple and complex forms leave many indelible impressions, principal of which is that they constitute some great affront to justice and

human rights. Because the environment has been terribly altered particularly by the industrial class, majority of the people have been disempowered by way of not having access to their environment on one hand and not having the necessary epistemological empowerment to enable them explore their natural and social environment. The totality of this state of affairs is that the people's rights to survival in most cases come under severe threat and naturally no man takes life threatening situation with ease.

The menace of climate change is present in every region of the world yet it is one life threatening condition that receives the least attention. Least attention in the sense that efforts to critically discuss and highlight matters arising out of it usually turn out to become "theatre of international diplomacy" (Brand, Bullard, Lander and Mueller, 2009) where participating states show their degree of expertise in manipulating and maneuvering the others so that their interests can be sustained. In all these, states intensify their diplomatic manipulations in alarming forms so much that problems of climate change persist both in proportion and in ravaging humanity. What helps to reinforce climate change according to Brand et al (2009) is that "environmental policies in general and climate change policies in particular are formulated in line with dominant political and economic structures and interest".

An unfortunate revelation which the above points towards is that people globally look up to the major actors, political and economic systems whose mode of operations promote and sustain climate change and environmental problems as models to be replicated. For instance governments and people in the south look up to the governments and people in the north as well as their corporations as people and institutions to copy from. Through this mindset a vicious cycle that finally sustains the status quo is legitimized both in the North and in the South; and what people who legitimize these practices lose sight of is that emerging policies reinforce the mindsets and interests of a given class of people namely the political and industrial class. Additionally, these self serving environmental diplomats make members of the global community to believe that no single individual or state can on their own handle problems of climate change rather problems of climate change must be handled globally.

The uncritical acceptance of this by members of the global community secures the environment and its resources for the power that be and the irony is that the same power that be is responsible for climate change and the misery and the impoverishment of the unsuspecting members of the global community. The point is that in the global climate change discourse commoners, wherever they are lose their resources to the power that be, principally the Western governments and their allies in the various regions of the world. In fact a relationship of domination may be the best description of happenings that unfold in environmental and climate change regimes so much that regions are beginning to express reservations in the sincerity of the North in their climate change crusade. This is evidence in the remark by Brand et al (2009) that "the global south argues that the policies driven and encouraged by UNFCCC are today a greater threat to their livelihood than climate change itself". The above is also supported by Melber (2009) when he writes that "despite more than 300 multilateral agreements negotiated and entered into since 1972, the world's climate as we know it faces ultimate collapse. Political and institutional constraints have stood in the way of a solution".

Characteristically, what comes with climate change is alteration in weather which can be advantageous or disadvantageous to living organisms but one basic truth is that living organisms in such environments must sharply make radical adjustments to their new environments. In other words the ability to survive better or worse than before depends on the suitability of the new environment in which living organisms find themselves. For instance if the alteration in weather can make rainfall to be in abundance in environments that used to lack rainfall before there will be possibility of improved crop yield for crops that need heavy rainfall while crops which survive in environments that require less rain can be placed at a serious disadvantage.

Rise in global temperature comes with rise in sea levels, droughts, precipitation, flood, storm, submergence of coastal communities, destruction of crops, farm lands and higher occurrence of natural disasters as well as depreciation in people's health and nutritional status resulting from disruption in agriculture, which on its own must result or lead to food shortages. Regions where due to climate change flooding becomes the norm can record higher incidence of contamination from pathogenic viruses and bacteria, increase in water borne diseases that can lead to severe health challenges especially as the possibility of salt water polluting and contaminating ground water can be self-evident as well as the environment becoming wetter while regions which suffer acute shortage of water can on the other hand witness decreases in economic activities and possible conflicts over scramble for access to water.

The above scenario leads to other social problems such as increase in conflicts between and among persons and regions who are victims of the onslaught of climate change. The contamination of any available source of drinking can result in overstressing any other available source of drinking water perceived to be safe and people who lay claims to the original ownership of the overstretched water may likely not take it kindly with their neighbours whose own source of water had earlier been polluted. It is also possible that a consequence of climate change can be the invasion of territories by strange phenomena unknown to territories prior to climate change or put in a simpler term the possibility of shifts in the boundaries of major ecological zones. Anyone who is familiar with the intractable and vicious cycle of conflicts and crises in many parts of Nigeria can recall that shifts in ecological zones is a primary cause of the movements of some ethnic nationalities into regions that they had not in their entire history stepped their foot into. Because the environment had radically changed courtesy of climate change and desert from the Northern part of Nigeria had seriously encroached deeper into the Southern part of Nigeria with Fulani herdsmen penetrating territories some hundred years ago their grandparents did not know.

The onslaughts of flooding and erosion in the Niger Delta region of Nigeria due to climate change have created social problems in the form of sacking communities and re-sacking them from one point of relocation to another. In fact there is no one region of Nigeria that has not witnessed one serious consequence of climate change or the other. Rise in temperature can further compound many environmental problems of residence in dry seasons and their environment becoming drier with the possibilities of higher loss of moisture capable of leading to drought, desertification or desert encroachment.

One disturbing revelation is that climate change has come to stay because the rise in temperature as witnessed presently must increase by far, with developing and underdeveloped states working assiduously to embrace industrialization or industrialize like the developed nations, implying that abetting climate change is not in sight. Since this is the case, mankind whose actions and inactions are at the centre of climate change can be called to order morally in the form of informing or reforming him on sustainable ways of coping with climate change through education. Much has been done in the direction of using education to create awareness on climate change but not much has been achieved because of the technicist approach, the dominance of science and the sustenance of a top-down elitist approach which principally ignores the interests of the majority of the citizens.

The new focus canvassed herein will generally integrate top-down and bottom-up approaches for enhancing humankind's understanding of the intricate web of life on earth in particular and the universal in general by instilling moral disciplines and moral rationality in members of the human community whose actions and inactions are at the centre of past and present environmental problems holding man hostage. The guiding principle is one which acknowledges the fact that there is more wisdom in providing education and learning for a people, especially people found within the tropics in which Niger Delta region of Nigeria is one because unlike the temperate regions, such regions are more likely to experience greater scales of environmental challenges. Such educational provisions can enable such people to mitigate

and adapt to the challenges of disruptions in weather and climate change better, than to institute a culture that prioritizes quick and emergency responses when disasters have occurred. Any society that equips its citizens with the capacity to mitigate disasters before they occur is on the other hand not instituting precautionary principles alone but avoiding losses which should have occurred in the state if such disasters were allowed to occur.

3. NIGER DELTA REGION OF NIGERIA: A BRIEF FOCUS

The Niger Delta is situated in the Southern part of Nigeria. It is a heterogeneous, multi-culturally diverse region of 70,000 square kilometers (Saro-Wiwa 1995). The region is strategically important not only to Nigeria but the world at large. Why this is so is that the potentials in the region are phenomenal. This makes the region important to the global economy and is one of the potential motivations for the “third scramble for Africa”. Because the region is strategic to the global economy, the region has been labeled an “area of vital interest” by those who matter in global economic and political decisions. Among the potential of the region, oil and gas which paradoxically some people call “black gold” and “devil’s excrement” stand out.

Because oil and gas deposits in Nigeria constitute the life wire upon which the economy of Nigeria stands, it can be absolutely right to describe the Niger Delta region of Nigeria “as holding the key to Nigeria’s economic prosperity and greatness”. This greatness occasioned by oil and gas in the Niger Delta region of Nigeria has been at a great cost. Environmental degradation, abuse of citizen’s environmental and general human rights are common, dislocation, marginalization, repression, alienation, corruption and denial of the people’s means of livelihood occur without any moral considerations for their sustainable development. Social contradictions such as poverty, misery, hunger in midst of wealth has become the order of the day for the residents of the region. These are in addition to serious health challenges and deaths acrossed all ages occasioned by the activities and actions of oil and gas exploration, exploitation and production companies. Saro-Wiwa (1995:131) says it all when he describes the situation in Ogoni land, which is not different from the situation in other Niger Delta ethnic nationalities in these words:

The Ogoni is embattled and imperiled. Since oil was discovered in the area in 1958, they have been victims of a deadly ecological war in which no blood is spilled, no bones are broken and no one is maimed. But the people die all the time. Men, women and children are at risk, plants, wildlife and fish are destroyed, the air and water are poisoned and finally the land dies. Today Ogoni has been reduced to a waste land.

Justifications for the claim of Saro-Wiwa (1995) in the Niger Delta region of Nigeria can be ascertained without much scrutiny. It is a common knowledge that gas has been flared continuously every twenty four hours in the Niger Delta region of Nigeria since 1958 till today. The meaning of this is that there has been heavy concentration of carbondioxide, methane and other substances that are unfriendly to the environment in the environment. Indeed it has long been recognized that gas flaring in the Niger Delta region of Nigeria has no equivalent in the whole world, meaning that Nigeria is reputed to be the greatest gas flaring country in the world. The cumulative effects of the destructive and unfriendly nature of oil and gas exploration, exploitation and production in Niger Delta region of Nigeria is the acceleration of actions that contribute to global warming and climate change.

In the face of monumental environmental problems as the above, “the environment and community health is often of secondary concern to the state and of no concern to the Multinational Corporations (Johnston and Button 1994).

On top of all these the proceeds from oil and gas exploration, exploitation and production in Nigeria's Niger Delta region are not "equitably distributed" (Johnston 1994) and some people – the Niger Deltans, "pay a greater price than others" (Johnston 1994) in oil and gas production in Nigeria. These environmental problems in the Niger Delta suggest that residents in the area may end up "unequal" with their contemporaries in other parts of Nigeria and the world at large simply because "beneath their homes lie economic and strategic mineral resource (Johnston 1994) "which has proven to be a curse than a blessing".

With increasing awareness on the part of the people of the dangers and threats to the survival of their present and future generations, coupled with hunger, unemployment, frustration, hopelessness, lack of advocacy or institutional measures by both the government and multinational corporations to mitigate the problems in the region, there are presently increase in human rights, environmental and social justice movements which call for positive changes and better deals for the people, with such agitations focusing on "a fair share of oil wealth generated from their area" (Okoko and Ibaba 1997). As a proof of the claims of the Niger Deltans, Taiwo and Aina (1991:49-50) write that:

Today's urban development in major Nigerian cities can be traced to the oil wells located in the remote villages of the country where oil continues to gush out day and night. It is the oil wells of these villages that has in recent times brought skyscrapers, express roads, fly-overs and other physical structures to cities and towns which are far away from the gushing wells. But for the territorial waters where the black gold, oil, is mined, there is sad tale full of sound and fury signifying something – poverty and neglect. To them the discovery of oil is a curse. It means poverty, hunger and disease. It means undulated suffering, barefaced deprivation and capitalist exploitation, the magnitude of which can only be compared with what happens to a cow in the hands of a selfish dairy man who is concerned only with milking the animal dry, caring less about its well being and disposing it of as the milk well dries. As long as he makes his money the cow can wither and drop dead.

Recently the people's demand for fairness and justice in the distribution of oil wealth and government's total opposition and rejection of this demand is at the root of the various violent conflicts which Aaron and Patrick (2008) remark is a defining feature of the Niger Delta region of Nigeria. In most cases the Nigerian government has perceived these as security threats and has through security operatives descended heavily on its own citizens. These, in combination with the divide and rule tactics of the Nigerian state and the multinational corporations in the Niger Delta have brought about multi-level conflicts and crises at the levels of community versus community. Community versus government and community versus multinational corporations, which Eteng (1998:23) elaborates in these words:

...such conflicts now range between elite groups, between competing claimants of traditional chieftaincy stools, between youth organizations, on one hand and between them and community elders, elites and village community residents and even between villagers and demergent community – company go-betweens.

It is on record that the denial and repression visited on the people of the Niger Delta by the Nigerian state and the multinational corporations in the region is at the centre of the actions of the people, which also contribute in causing environmental problems in the region. That

unemployment and poverty is high in an environment that is full of opportunities makes the able bodied youths indulge in criminal activities and in oil bunkering which though illegal has now become a short cut for access to oil and an alternative way of survival. Whereas this exists in the Niger Delta region of Nigeria, its potentials in causing environmental problems are high and its potential in promoting and sustaining trafficking in arms with which the oil bunkering barons can face state security operatives and therefore remain in business is also high. That this is the case also means another threat to the already fragile Niger Delta environment, suggesting that both the actions and activities of the government, the multinational and the people themselves contribute to environmental problems in the Niger Delta region of Nigeria and can be calling for measures through education for redressing the trends of events.

4. THE ROLE OF EDUCATION IN ADJUSTMENT OF DESIRABLE SOCIAL CHANGE

Every society that is desirous and determined to grow and develop looks up to education for guidance and to chart the way upon which the genes that blossom into growth and development can be sustained. Through education states introduce innovations for addressing complex and complicated issues which crop up in the course of its existence. This suggests that states conceive education as a dynamic institution to appeal to for answers to problems. As an institution for answering the problems of the state, education provides and develops the human capital needs of state. By developing the human capital needs of the state, education improves and stabilizes the productivity and economic growth of the state. Individuals who enroll into educational institutions and successfully go through it secure passport to better opportunities and prosperous future.

Fundamentally education develops the individual's basic creative thoughts for advancement, moral and aesthetic appreciation and it is the development of these basic creative thoughts that the individual explores to solve his daily problems and respond to his daily challenges as well as acquire skills that enable him live in harmony with his fellow human beings and with nature. The ability of education to achieve any of the above is dependent on dynamic and consciously planned curriculum and a combat ready workforce that can religiously employ cutting edge technologies and state-of-the-art pedagogical methods to stimulate the learners to learn. The teacher as one at the helm of affairs in educational institutions keys into his professional expertise to explore innate potentials in the learners and correspond same with environmental factors in order to achieve his aim, the aim of the learner and that of the society.

Learning in educational institutions that is of most worth is that which provides the learner with the capacity to understand, respond, interpret and proffer solutions to problems and challenges that are both important locally, nationally and internationally. Learning that is also important is that that equips its recipients with the knowledge of issues and concepts upon which the survival of the individual and his stand strongly hinges. Interestingly any concept or phenomenon upon which education presses its seal and passes its critical currents and most importantly learning occurs as a consequence of education does not remain the same again. There must be window of opportunities through which the society understands such problems better for the sustainable growth of humanity. This is why education is the last hope of mankind in proffering solutions for mitigating the problem and challenges of climate change.

5. EDUCATIONAL INNOVATIONS FOR MITIGATING CLIMATE CHANGE IN NIGERIA

No doubt education is an article of faith for solving mankind's specific and general problems. The way any nation that dreams of sustainable development employs education in any of its forms for the attainment of such predetermined goal is self evident of the central role education plays in human development. Education helps to sensitize, conscientize and create awareness in a people to humanely and radically rethink themselves in the face of challenges,

which, if not fully challenged can bring about present and future regrets as well as give rise to reduction in the quality of lives of a people. These account for why Aminigo and Nwaokugha (2009:1) assert that:

Education has been and will continue to be a reliable instrument through which states can direct and redirect the sociological, epistemological and metaphysical outlooks of their citizens. A state can use education to stimulate modern behaviours and philosophical reorientation of its people. Education can widen the mental capabilities of the individual and socialize him to live more decent and disciplined life capable of making him an acceptance member of his society and state.

Of all areas in which knowledge acquisition and pursuit of education is necessary, education in environment and environmental issues stand out. This is because an educational provision that focuses on the environment is directly and indirectly prioritizing human survival which “squarely depends on the environment” (Aminigo and Nwaokugha 2010). Again an educational provision which focuses on the “environment and the way we relate with it” can in addition to emphasizing “life and all life can afford” serve as window of opportunities for assessing values, act as parameter for evaluating and analyzing human rights as well as economic and political power relations within and across states” (Nwaokugha and Osaat 2011).

Revelations and recent developments show that mankind’s activities and relationship with the environment have globally given rise to monumental and colossal environmental problems such as global warming with its associated climate change which fundamentally calls for urgent and radical curricular and pedagogical innovations in education for mitigating such environmental problems. Innovations in education can be rooted through change in curricular and pedagogical strategies where the priority can be on sensitizing the masses on attitudinal changes that can enhance mankind’s understanding of the “processes of our cosmic environment in general and the earth in particular (Eboh 1999). This public awareness campaign through education can expose the dangers of climate change and work out modalities for capacity building that can mitigate the occurrence of climate change.

Such efforts can start with convincing moral persuasions where the general public and those who cause environmental problems can be education on the nature and potentials of nature especially, creating awareness on that which deserves a higher respect – man or nature. This line of thinking can be presented in a way that an adequate understanding is established concerning who should make provisions for change and room to study events and phenomena around him. Common sense should tell us that nature by its nature cannot change or be educated and nature cannot study itself rather it is human beings who should strive to study and master nature. Such moral persuasions through education should open our senses that it is man after all that will pay and bear the consequences of whatever violent devastation that is visited on nature. Again curricular and pedagogical innovations that focus on moral persuasion can hammer it into the ears of the rich and other of their allies who destroy the environment that saving the environment is in their own overall interests. One believes this should be the new curricular, epistemological and pedagogical theorizing to be prioritized by education if mankind can mitigate the impending genocidal, disastrous and catastrophic suicide missions man had already initiated through his ruthless and senseless exploration of the resource of the environment.

Innovations in education can be developed where multidisciplinary and interdisciplinary curricular and pedagogical provision can be a priority. Such endeavours can bring management experts, entrepreneurs, scientists, philosophers and policy makers together to fashion out ways of addressing and containing the menace of climate change. Innovations here which can involve

scholars across disciplines can undulate between adaptation and prevention (Schneider 1989), of those behaviours which promote climate change and other problems in the environment.

Emphasis can be on providing the general public information on how to contain climate change as well as afford each of the specialists in the plan opportunities to understand the positions of one another on climate change and through this way generate information on common ground upon which humanity can base to solve or face the challenges of climate change. In scholarship endeavours multidisciplinary and interdisciplinary approaches to solving problems are fundamentally beneficial to humanity as it enables individuals to contribute their quarter into solving common problems. Basically this approach can develop deeper into incorporating other concepts like democracy and making the teaching of the invocation of democracy in environmental matters compulsory can be a welcome development because issues bordering on environmental degradation or environmental problems generally have their origin in the actions and activities of man or are perpetuated by people and attempts at mitigating such problems can be directed at the people who inhabit a territory, state or region where such problems occur. The point one is making is that education should as an innovation prioritize the teaching and invocation of the principles of democracy particularly in issues of the environment and all other affairs whose consequences have direct implications for all persons. The justification for this is that as democracy existentially is a thing of choice, people may likely not choose any thing that may inconvenience or threaten their lives. Innovation in education that creates this awareness can sensitize a people that their ability to choose what happens in their environment is in keeping with their natural human right to life and healthy living and it is their right to reject any one they consider harmful.

Curricular and pedagogical innovations in education can target breaking new frontiers of knowledge that can reduce mankind's reliance on sources of energy that increase carbon dioxide and other substances that are unfriendly to the environment. Curricular and pedagogical innovations in education can target alternative sources of energy by way of technological breakthroughs in solar, and wind energies which have been found to be environment friendly. The path canvassed upon which education can take is to engineer and re-engineer new ways of doing things which by implication is abandoning old ways of doing things that are found to be irrelevant in the present circumstances as well as unhealthy to man and nature. The point is that for education to regain its pride of place in a climate change regime, a culture of research and continuous research should be a priority as to practically empower citizens with dynamic and workable mechanisms for adjustment.

Within the framework of multidisciplinary and interdisciplinary approaches, innovations can be developed whereby we sensitize humanity globally to embrace moral rationality and logical analytic insights in all our dealings and relationships with the environment on one hand and our fellow human being on the other. In our relationship with our fellow human beings, we can strive to "improve the knowledge and estimates available as a foundation for making sound, practical decisions about how to cope effectively with greenhouse effects" (Patrinos 1990).

Above all an angle which curricular and pedagogical innovations in education can focus special attention on is the development of strategies for the total elimination of a culture of greed and selfishness in mankind on one hand and the institutionalization of a culture of generosity or precisely the biblical injunction of "love your neighbour as you love yourself" on the other hand – where the injunction of 'love your neighbour as you love yourself' applies, the practice where by some people do not support the goals of sustainable resource management (Berge 1994) simply because their own environment is not endowed with natural resources and consequently they cause colossal and monumental environmental problems in the process of exploring the environment of others can be frowned at. When educational innovations are put in place for practising the cardinal virtue of love, especially in the exploration and exploitation of

environmental resources, mankind can rest assured that he is on the part of tracking down the root cause of all environmental problems.

6. CONCLUSION

More than any other region of Nigeria, the Niger Delta faces more challenges of climate change due to multiplicity of activities which are not friendly to the environment. Majority of the activities derive from the operations of Multinational Corporations which are involved in oil and gas exploration and exploitation activities in the region. One prominent action which is a consequences of oil and gas exploration and exploitation activities is gas flaring. Gas flaring in the Niger Delta region of Nigeria is reported to be the highest in the world. The side effects of gas flaring include causing acid rain, increase in the temperature of the environment which results in the alteration of vegetation with its attendant destruction of species known to an environment, expansion of ecological zones and possible replacement of species with the types which, are foreign to an environment. Expansion of ecological zones and conflicts that come with it are already self evident in many regions of Nigeria and other parts of the world. These activities of Multinational Corporations in the Niger Delta make living and survival very difficult for residents of the Niger Delta region.

In all these, one thing is sure. Climate change as a fallout of global warming has come to stay. The developmental aspirations of developing and underdeveloped countries to catch up with industrialized countries by industrializing imply that more substances and more activities that cause global warming will be on the increase in the environment.

To this end, a case has been made in this paper that education must reposition itself so as to exploit any possible advantages that may come with climate change as well as evolve strategies for minimizing its disadvantages for the advancement of mankind. Education can do these by introducing innovations that can prioritize change in the behaviour of individuals, corporate institutions and states so as to reposition in readiness for the challenges that come with global warming and climate change. These can be in the form of preventing behaviours that promote changes that are unhealthy to the environment and developing behaviours that can enable one to adapt to one's new environmental situations. The extents in which people respond to these challenges are giant responsibilities of education.

Innovations in education can also take the form of multiplying and doubling efforts in informing, reforming and sensitizing mankind of the trends of development in his environment and ensure education provides strategies upon which to cope with the peculiar challenges of each environment by avoiding a one size fits all approach for every environment when individual environmental challenges are not the same. This is serious because climate change is a universal phenomenon but its impacts on regions and territories are not the same. For success to be attained in this direction, educational innovations can prioritize developing in learners the ability to think rationally and to creatively analyze situations so much that the environment is prioritized as life and all what life can afford. One unfortunate development about climate change like other environmental problems is that members of the global community lack the necessary awareness on ways of adjusting to challenges occurring in the environments. This matter is made worse by the fact that little attempts to address and create awareness on climate change only result in international environmental diplomacy where people whose actions and activities are responsible for climate change and other environmental problems gain further unlimited access to continue in their immoral and life threatening adventures.

Consequently, sourcing solutions to environmental problems from the international community is a monumental fraud and the highest demonstration of ignorance from humanity because such efforts only end up in securing the environment and its resources for the major actors in the west and their allies all over the world. What ought to be the case is that individual states should consciously device strategies to educate their citizens on how their actions

including those of multinational corporations degrade the environment and cause climate change. This awareness, when upheld religiously can limit the extent in which the people indulge in such actions.

Curricular and pedagogical innovations in education for achieving this behaviour can be deep rooted in the inculcation of critical pedagogy and critical literacy where citizens can acquire the skills of asking questions demanding for why of things and reflecting on the state of affairs in their state and territory. Becoming critical in attitude requires one to be relatively suitable and comfortable so as to be autonomous in all ramifications. Base on this education can lay emphasis on entrepreneurship education and the acquisition of relevant environment friendly skills for the empowerment of the people, while strongly urging states to limit excess use of environmentally unfriendly goods and products.

Curricular and pedagogical strategies can stimulate in learners reflections on what becomes of individuals, regions, and states whose own life support system as the environment has been destroyed or compromised. The sustenance of this line of thinking can sensitize individuals that threats to the environment is threat to both present and future generations and this can have the potentials to produce better relationship with the environment.

The ability of innovations in education to do these and do them urgently can assure humanity globally that education today and tomorrow still illuminates that ray of optimism as a rallying instrument and catalyst for solving mankind's specific and general problems.

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